St Engineering Telematics Wireless SEQUENCER Water Meter Sequencer User Manual

ST Engineering Telematics Wireless Ltd

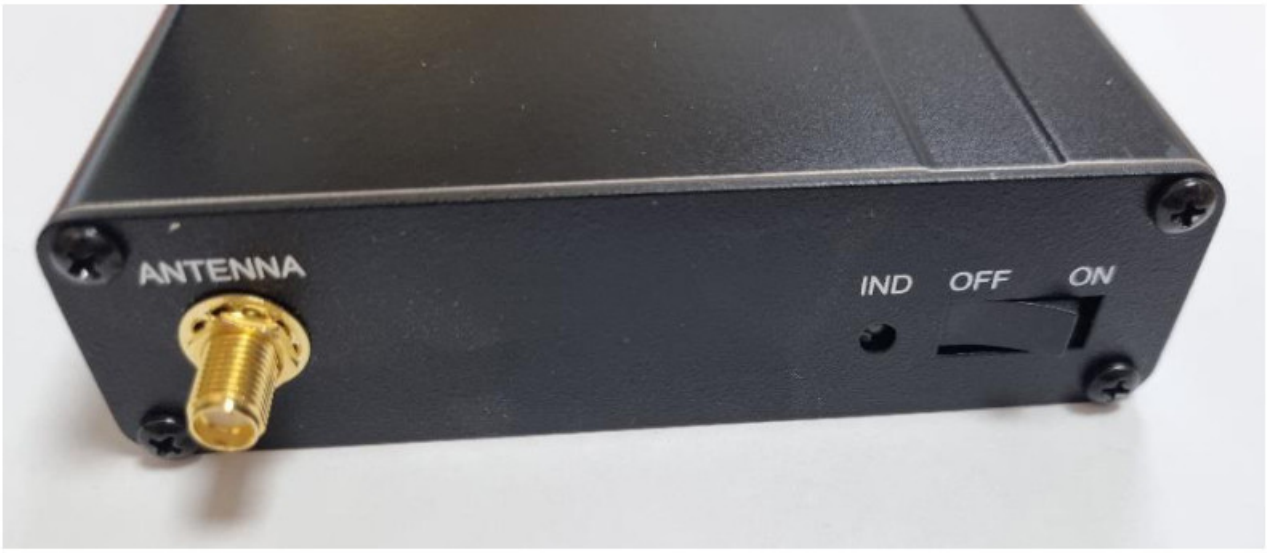
Sequencer
User Manual
Model: SEQUENCER

Revision 1.0, May 2nd, 2021

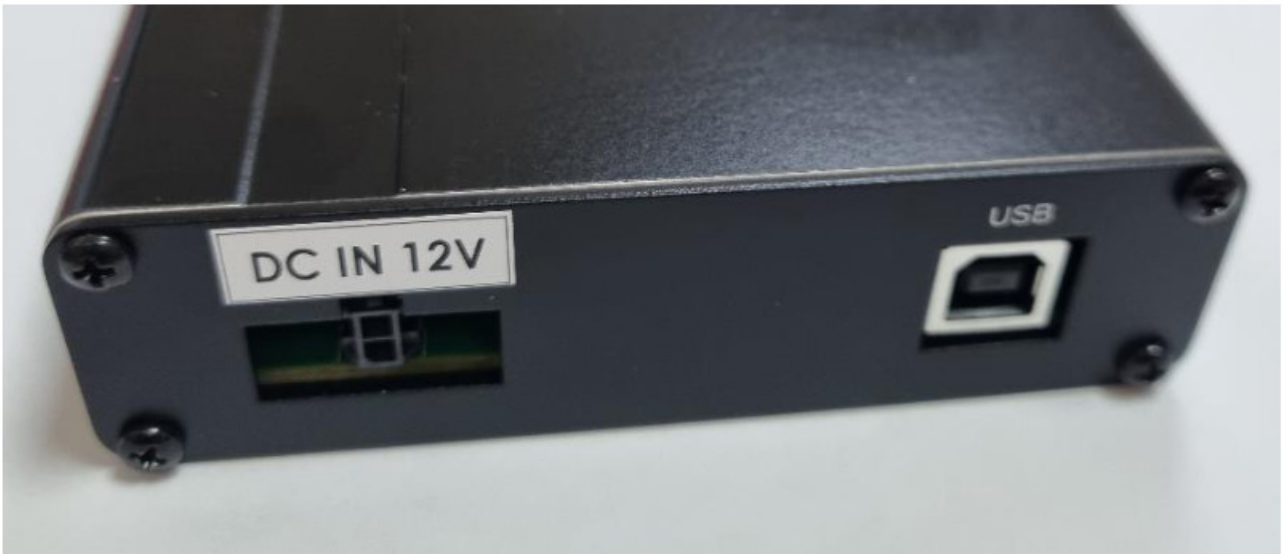
Contents

General description

The Sequencer is a part of an Advanced Water Metering Infrastructure that communicates with water meter end-points via LoRa wireless communication.
The infrastructure includes a sequencer, a LoRa gateway and PC computer running the LoRa server and application software to manage the communication with the water meter endpoints.



Front panel



Rear panel

Technical Data

Electrical interface

Table 1: Electrical interface

Front panel Power switch IND Antenna connector Rear panel Power supply , external AC/DC USB

Table 1: Electrical interface

Front panel	**Value**
Power switch	ON/OFF
IND	LED indicator
Antenna connector	SMA female
Rear panel	**Value**
Power supply , external AC/DC	120VAC to DC in 12VDC
USB	Type B

RF Radio Characteristics

Table 2: RF radio characteristics

Parameter	**Value[1]**	**Unit**
Operating Frequency	902-928	MHz
Modulation	LoRa	
Maximum Transmitter output power	20	dBm
Maximum Receiver Sensitivity	-125	dBm
Antenna, omni directional	2.5max	dBi

Mechanical Characteristics

Table 3: Mechanical characteristics

Feature	**Specifications**
Dimensions (mm) (connector excluded)	128 x 100 x 27 LxWxH

Environmental Characteristics

Table 4: Environmental characteristics

Feature	Specifications
	-20°C to +70°C
Storage Temperature	-20°C to +70°C
Relative Humidity	20% – 90% RH, non-condensing

Installation

Connect the antenna.
Connect the AC/DC adaptor.
LED indicator

Power ON	LED is lit Yellow.
Tx mode	LED is lit red when data is transmitting.
Rx/Idle mode	LED is lit green when receiving mode or idle mode is enable.

Regulation Information

FCC Part 15 Regulation Class B digital device notice
The digital circuit of this device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAN ICES-3 (B)/NMB-3(B)
This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

FCC interference Notice
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Industry Canada interference Notice
This device complies with Industry Canada’s license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

FCC and Industry Canada Radiation Hazard Warning
WARNING! To comply with FCC and IC RF exposure compliance requirements, the device should be located at a distance of at least 20 cm from all persons during normal operation. The antennas used for this product must not be co-located or operated in conjunction with any other antenna or transmitter.
The device meets the exemption from the routine evaluation limits in section 2.5 of RSS-102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

WARNING! Changes or modifications to this equipment not expressly approved by the party responsible for compliance (ST Engineering Telematics Wireless Ltd.) could void the user's authority to operate the equipment

Documents / Resources

	St Engineering Telematics Wireless SEQUENCER Water Meter Sequencer [pdf] User Manual SQUNCR, NTASQUNCR, SEQUENCER, Water Meter Sequencer